

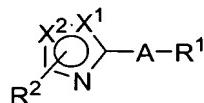
Preliminary Amendment
National Stage of PCT/JP2005/003755
Attorney Docket No. Q96727

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original) A thiazole derivative represented by the formula



or a pharmaceutically acceptable salt thereof,

wherein:

X¹ and X² are different from each other and represent a sulfur atom or a carbon atom;

R¹ represents a phenyl group;

a phenyl group substituted with 1 to 5 members selected from the group consisting of halogen atoms, alkyl groups having 1 to 6 carbon atoms, alkoxy groups having 1 to 6 carbon atoms, a hydroxy group, phenylalkoxy groups having 7 to 12 carbon atoms, and alkylamino groups having 1 to 6 carbon atoms;

a phenyl group condensed with a 5 to 7 membered hetero aromatic or non-aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

a pyridyl group;

a quinolyl group;

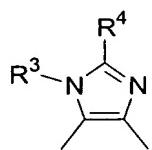
an isoquinolyl group; or

a pyridyl group condensed with a 5 to 7 membered hetero aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

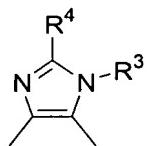
R² represents a hydrogen atom, a halogen atom, an alkyl group having 1 to 6 carbon atoms,

an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms, an alkoxy group having 1 to 6 carbon atoms, an alkanoyl group having 1 to 6 carbon atoms, or a hydroxyalkyl group having 1 to 5 carbon atoms; and

A represents a group which is represented by the formula



or



wherein:

R³ represents a hydrogen atom;
a hydroxy group;
an alkyl group having 1 to 6 carbon atoms;
a phenylalkyl group having 7 to 12 carbon atoms; or
a phenylalkyl group having 7 to 12 carbon atoms, substituted with a hydroxy group, an alkoxy group having 1 to 6 carbon atoms, an alkoxy group having 1 to 6 carbon atoms substituted with an alkoxy group having 1 to 6 carbon atoms, or an alkoxy group having 1 to 6 carbon atoms substituted with an alkylamino group having 1 to 6 carbon atoms,

R⁴ represents a phenyl group;

a phenyl group substituted with 1 to 5 members selected from the group consisting of halogen atoms, alkyl groups having 1 to 6 carbon atoms, alkoxy groups having

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1 to 6 carbon atoms, a carbamoyl group, and a cyano group;
a hydrogen atom;
an alkyl group having 1 to 12 carbon atoms;
an alkenyl group having 2 to 12 carbon atoms;
a cycloalkyl group having 3 to 7 carbon atoms;
an alkyl group having 1 to 12 carbon atoms substituted with an alkoxy group having 1 to 6 carbon atoms, a hydroxy group, an alkoxyphenylalkoxy group having 8 to 12 carbon atoms, a phthalimidoyl group, a toluenesulfonyloxy group, or a morpholino group;
an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms;
a cycloalkyl group having 3 to 9 carbon atoms substituted with an oxo group;
a tetrahydropyranyl group;
a 4-piperidinyl group;
a piperidinyl group substituted with an alkyl group having 1 to 6 carbon atoms or a t-butoxycarbonyl group;
a cyclohexanespiro-2'-(1,3-dioxoranyl) group;
a pyrrolidin-2-one-5-yl group;
a group represented by the formula $-Y^1-Z^1-NR^5-Z^2-Y^2-R^6$,
wherein:
 Y^1 and Y^2 are the same or different from each other and represent a single bond or an alkylene group having 1 to 12 carbon atoms;
 R^5 represents a hydrogen atom or an alkyl group having 1 to 12 carbon atoms;
 Z^1 and Z^2 are the same or different from each other and represent a single bond;
an alkylene group having 1 to 7 carbon atoms;
-CO-;

-CO₂-;

-SO₂-; or

-OCO-, and

R⁶ represents

a cycloalkyl group having 3 to 7 carbon atoms;

an alkyl group having 1 to 6 carbon atoms substituted with 1 to 3 halogen atoms;

an alkenyl group having 2 to 6 carbon atoms;

an alkynyl group having 2 to 6 carbon atoms;

an amino group;

an amino group substituted with 1 to 2 groups selected from the group consisting of an alkyl group having 1 to 6 carbon atoms, a cycloalkyl group having 3 to 7 carbon atoms, and a t-butoxycarbonyl group;

a piperidino group;

a piperidinyl group;

a piperidinyl group substituted with an alkyl group having 1 to 6 carbon atoms;

a pyrrolidinyl group;

a piperazinyl group;

a piperazinyl group substituted with an alkyl group having 1 to 6 carbon atoms;

a morpholino group;

a hydroxy group;

an alkoxy group having 1 to 6 carbon atoms;

an alkoxy group having 1 to 6 carbon atoms substituted by a hydroxy group or an alkoxy group having 1 to 6 carbon atoms;

an oxetan-2-yl group;
a tetrahydrofuryl group;
a tetrahydropyryanyl group;
a hydrogen atom;
a phenyl group;
a phenyl group substituted with an alkoxy group having 1 to 4 carbon atoms;

or

a group that forms a ring when linked to the nitrogen atom of the above formula; or

a group represented by the formula -Y³-CO-R⁴¹,

wherein:

Y³ represents a single bond or an alkylene group having 1 to 7 carbon atoms,

R⁴¹ represents

a hydroxy group;

an alkoxy group having 1 to 6 carbon atoms;

a piperidino group;

a piperazin-1-yl group substituted by an alkyl group having 1 to 6 carbon atoms, a morpholinoalkyl group having 5 to 10 carbon atoms, or an alkylaminoalkyl group having 2 to 14 carbon atoms; or

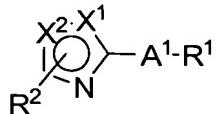
a morpholino group.

2. (original) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R² is a hydrogen atom, a halogen atom, an alkyl group having 1 to 6 carbon atoms or an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms.

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3. (original) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R² is an alkyl group having 1 to 6 carbon atoms or a trifluoromethyl group.
4. (original) The thiazole derivative or a pharmaceutically acceptable salt thereof according to claim 1, wherein R² is a methyl group or a trifluoromethyl group.
5. (currently amended) The thiazole derivative or a pharmaceutically acceptable salt thereof according to ~~claim 1-any one of claims 1 to 4~~, wherein R¹ is a phenyl group condensed with a 5 to 7 membered hetero aromatic or non-aromatic ring containing at least one hetero atom selected from the group consisting of N, O, and S.
6. (currently amended) The thiazole derivative or a pharmaceutically acceptable salt thereof according to ~~claim 1 any one of claims 1 to 5~~, wherein X¹ is a sulfur atom and X² is a carbon atom.
7. (currently amended) An ALK5 inhibitor having, as an active ingredient, the thiazole derivative or a pharmaceutically acceptable salt thereof according to ~~claim 1-any one of claims 1 to 6~~.
8. (currently amended) The ALK5 inhibitor according to claim 7, which is a therapeutic agent for glomerulonephritis, diabetic nephropathy, hepatic fibrosis, liver cirrhosis, pulmonary fibrosis, proliferative vitreoretinopathy, or alopecia areata, or a hair growth agent.
9. (currently amended) The ALK5 inhibitor according to claim 7 or 8, which is an external medicine.
10. (original) A hair follicle proliferation stimulant, having an ALK5 inhibitor as an active constituent.
11. (original) A hair growth stimulant or a hair growth agent, having an ALK5 inhibitor as an active ingredient.

12. (original) A thiazole derivative represented by the formula



or a pharmaceutically acceptable salt thereof,

wherein:

X¹ and X² are different from each other and represent a sulfur atom or a carbon atom;

R¹ represents a phenyl group;

a phenyl group substituted by 1 to 5 members selected from the group consisting of halogen atoms, alkyl groups having 1 to 6 carbon atoms, alkoxy groups having 1 to 6 carbon atoms, a hydroxy group, phenylalkoxy groups having 7 to 12 carbon atoms, and alkylamino groups having 1 to 6 carbon atoms;

a phenyl group condensed with a 5 to 7 membered hetero aromatic or non-aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

a pyridyl group;

a quinolyl group;

an isoquinolyl group; or

a pyridyl group condensed with a 5 to 7 membered hetero aromatic ring having at least one hetero atom selected from the group consisting of N, O, and S;

R² represents a hydrogen atom, a halogen atom, an alkyl group having 1 to 6 carbon atoms, an alkyl group having 1 to 6 carbon atoms substituted with 1 to 5 halogen atoms, an alkoxy group having 1 to 6 carbon atoms, an alkanoyl group having 1 to 6 carbon atoms, or a hydroxyalkyl group having 1 to 5 carbon atoms; and

A¹ represents a group which is represented by the formula

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wherein X^3 represents a hydrogen atom, a halogen atom, or an alkyl group having 1 to 6 carbon atoms.